

Gas Simulation Worksheet

URL: <http://phet.colorado.edu/en/simulation/gas-properties>

1. In the right hand panel select 'temperature' as the constant parameter. Add one pump of 'heavy gas' to the container in the simulation.

Describe what happens as the gas molecules enter the chamber. (e.g., do they stay on one side of the container?)

2. Grab the man and pull him in so that the volume of the chamber decreases.

What happens to the reading on the pressure gauge as you decrease the volume of the chamber?

Why do you think this happens?

3. Switch the gas in the pump to the 'light gas' and add one pump.

Describe what you observe in the first few seconds after you add the new gas to the chamber.

4. Reset the simulation and in the right hand panel select 'volume' as the constant parameter. Add one pump of heavy gas to the chamber and wait for the molecules to spread out. Increase the temperature from 300K-450K.

What do you notice about the speed of the molecules as you make this adjustment? What about the pressure? Can you make any inferences about the relationship between the speed of the gas molecules and the pressure?